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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,099

Applicant(s)

MARTIN, DIDIER J.

Examiner

Krishnan S Menon

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-4 and 6-10 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mir et al (US 4,353,715) in view of Masson (US 6,010,833) and Benedek (US 6,027,649).

Mir (715) teaches a method of recycling wash water from paint booths containing carbon particles (abstract; col 1 lines 35-59, col 2 lines 1-8, col 3 lines 27-33), passing the water through cellulose acetate (hydrophilic) ultrafiltration membrane (col 2 lines 9-23), wherein a permeate having wash water free of carbon particles and other solutes is obtained as in instant claim(s) 1. Re the hydrophilic membrane having electrically charged surface, Mir has cellulose acetate membrane. Applicant discloses that the cellulose acetate membrane, among others, is hydrophilic with surface electric charges in page 3, lines 10-20. Cellulose acetate has carboxylate groups (acetate), hence should have charges as disclosed by the applicant.

Claim 1 recites method of recycling wash-water from treatment of a film, which Mir does not teach. Masson teaches a membrane process for recycling wash-water from photographic films (see abstract; col 1 lines 38-55). It would be obvious to one of

ordinary skill in the art at the time of invention to use the teaching of Masson in the teaching of Mir to recycle wash-water from photographic films containing carbon particles using a membrane as taught by Mir to remove the carbon particles and recycle the water.

Claim 1, as newly amended, also recites that the membrane is made using acrylonitrile polymers or copolymers, which Mir does not teach. Benedek teaches using membranes made of acrylonitrile copolymers for removal of powdered carbon, color, turbidity, etc from water (abstract, col 7 lines 32-35, col 3 lines 30-35, example 4, claims 7, 8, 14, 15, etc.) It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Benedek in the teaching of Mir for the effective removal of the contaminants in the water (Benedek col 2 lines 42-48) and for improved performance/cost savings (col 10 lines 25-38).

The water is recycled as in instant claim(s) 2 (col 2 lines 61-65); tangential filtration as in instant claim(s) 6 (see 30-fig 1) and removes dyes as in instant claim(s) 7 (col 3 lines 5-23).

Re claims 3 and 4, the wet contact angle is a property of the membrane. Claims recite materials similar to what is used in the reference. Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function or characteristic is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under

35 U.S.C. 102.” In re Best, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic. Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims.

Re claim 8, Mir does not teach the molecular weight cut-off of the ultrafiltration membrane used. Masson defines ultrafiltration membrane as membrane having molecular weight cut-off of over 2000 (col 1 lines 38-55). It would be obvious to one of ordinary skill in the art at the time of invention to select the membrane of appropriate molecular weight cut-off as taught by Masson for filtering the carbon particles in the teaching of Mir, since Mir does not specify the molecular weight cut-off required.

2. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mir et al (US 4,353,715) in view of Masson (833) and Benedek (649) as applied to claim1 above, and further in view of Yamada et al (US 6,277,209 B1).

Mir in view of Masson does not teach cleaning the membrane using hydrochloric acid. Yamada teaches cleaning the membrane with hydrochloric acid (col 2 lines 46-54). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Yamada to in the process of Mir in view of Masson to clean the calcium scale deposits on the membrane.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mir et al (US 4,353,715) in view of Masson and Benedek (649) as applied to claim 1 above, and further in view of Hilgren (US 4,692,251) and Olsen (US 6,315,130 B1).

Mir in view of Masson does not teach use of a prefilter. Hilgren (251) teaches using a prefilter in ultrafiltration of fluids containing carbon particles col 1 lines 30-40, fig 2, col 5 lines 7-17), and Olsen teaches a polypropylene pleated filter for use as a prefilter (abstract). It would be obvious to one of ordinary skill in the art at the time of invention to use a prefilter in the teachings of Mir in view of Masson, as taught by Hilgren to reduce fouling and the load on the membrane (Hilgren col 5 lines 7-17), and would use the prefilter as taught by Olsen for its high efficiency (Olsen abstract).

Response to Arguments

Applicant's arguments filed 10/6/03 have been fully considered but are moot in view of the new grounds for rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 703-305-5999. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Krishnan Menon
Patent Examiner


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700